

WHAT IS CLAIMED IS

1. An image display apparatus comprising a plurality of display devices, and a driving circuit for applying signals
5 having different fall timings to said display devices,

wherein said driving circuit causes each of the signals to fall in a plurality of steps.

2. An image display apparatus comprising a plurality of display devices, and a driving circuit for applying signals
10 having different fall timings to said display devices,

wherein when each of the signals is to fall from a predetermined level of a display state to a predetermined level of a non-display state, said driving circuit changes an operation state of a signal fall circuit between the
15 predetermined level of the display state and the predetermined level of the non-display state.

3. An image display apparatus comprising a plurality of display devices, and a driving circuit for applying signals having different fall timings to said display devices,
20

wherein said driving circuit has a plurality of charge paths for changing a signal level from a predetermined level of a display state to a predetermined level of a non-display state, and when each of the signals is to fall, changes operation states of the plurality of charge paths between
25 the predetermined level of the display state and the predetermined level of the non-display state.

4. The apparatus according to claim 1, wherein at least one of the plurality of charge paths is connected to a predetermined potential.

5. The apparatus according to claim 3, wherein at least one of the plurality of charge paths is connected to a current source for flowing a predetermined current.

6. The apparatus according to claim 3, wherein the plurality of charge paths have different change amounts per unit time of the signal level when the signal level is to fall.

7. The apparatus according to claim 6, wherein the operation states of the plurality of charge paths are changed by exclusively operating charge paths having different change amounts per unit time of the signal level when the signal level is to fall.

8. The apparatus according to claim 3, wherein the plurality of charge paths are arranged to operate parallel, and the operation states of the plurality of charge paths are changed by changing the number of parallel-operating charge paths.

9. The apparatus according to claim 3, wherein the operation states of the plurality of charge paths are changed so that a time required to change the signal level from the predetermined level of the display state to a first level as a threshold level at which said display device operates or a level at which a display luminance by said display device

becomes substantially 0 is set to be shorter than a time required to change the signal level from the first level to a reference level as the predetermined level of the non-display state.

5 10. The apparatus according to claim 3, wherein the operation states of the plurality of charge paths are changed at a boundary of a threshold level at which said display device operates or the vicinity, or a level at which a display luminance by said display device becomes substantially 0 or
10 the vicinity.

11. The apparatus according to claim 3, further comprising a circuit for determining the operation states of the plurality of charge paths.

12. The apparatus according to claim 3, wherein said
15 apparatus further comprises, in correspondence with said plurality of display devices, wirings for supplying signals to said plurality of display devices, and a circuit for determining the operation states of the plurality of charge paths determines the operation states of the plurality of
20 charge paths in accordance with levels of signals supplied to wirings except for a wiring connected to a controlled charge path.

13. The apparatus according to claim 3, wherein said apparatus further comprises, in correspondence with said
25 plurality of display devices, wirings for supplying signals to said plurality of display devices, and a circuit for

determining the operation states of the plurality of charge paths determines the operation states of the plurality of charge paths in accordance with levels of signals supplied to wirings adjacent to a wiring connected to a controlled
5 charge path.

14. The apparatus according to claim 1, further comprising, in correspondence with said plurality of display devices, wirings for supplying signals to said plurality of display devices.

10 15. The apparatus according to claim 1, wherein the signal is an image signal.

16. The apparatus according to claim 1, wherein the signal is a pulse-width-modulated signal.

17. The apparatus according to claim 1, wherein said
15 driving circuit comprises a rise circuit for raising a signal level.

18. The apparatus according to claim 1, wherein said driving circuit comprises a rise circuit for raising a signal level separately from a fall circuit for causing the signal
20 level to fall.

19. The apparatus according to claim 1, wherein said plurality of display devices are connected in a matrix by a plurality of scanning signal wirings and a plurality of modulated-signal wirings perpendicular to the scanning
25 signal wirings.

20. The apparatus according to claim 19, wherein said

driving circuit is connected to the modulated-signal wirings.

21. The apparatus according to claim 19, wherein the scanning signal wirings are connected to a scanning circuit
5 for applying a predetermined potential to a scanning signal wiring selected from the plurality of scanning signal wirings.

22. The apparatus according to claim 21, wherein said driving circuit is connected to the modulated-signal wirings,
10 and applies a potential for driving said display device by a potential difference from the predetermined potential applied to a scanning signal wiring selected by the scanning circuit.

23. The apparatus according to claim 1, wherein said
15 display device comprises an electron-emitting device.

24. The apparatus according to claim 23, further comprising a light-emitting substance for emitting light by electrons emitted from said electron-emitting device.

25. The apparatus according to claim 23, wherein said
20 electron-emitting device is a cold cathode device.

26. The apparatus according to claim 23, wherein said electron-emitting device is a surface-conduction emission type electron-emitting device.

27. The apparatus according to claim 23, wherein said
25 electron-emitting device is an FE type electron-emitting device.

28. The apparatus according to claim 23, wherein said electron-emitting device is an MIM type electron-emitting device.

29. An image display method of driving a plurality of display devices by applying signals having different fall timings, comprising:

causing each of the signals to fall in a plurality of steps.

30. An image display method of driving a plurality of display devices by applying signals having different fall timings, comprising:

when each of the signals is to fall from a predetermined level of a display state to a predetermined level of a non-display state, changing an operation state of a signal fall circuit between the predetermined level of the display state and the predetermined level of the non-display state.

31. An image display method of driving a plurality of display devices by applying signals having different fall timings, comprising:

when the signal is to fall, changing operation states of the plurality of charge paths between a predetermined level of a display state and a predetermined level of a non-display state using a plurality of charge paths for changing a signal level from the predetermined level of the display state to the predetermined level of the non-display state.